Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Agricultural Engineering

AI3003 - Process Engineering of Fruits and Vegetables

Regulations - 2021

Duration : 3 Hrs *Maximum : 100 Marks*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Define harvesting maturity.	RE	1	2
2.	What is pre-cooling?	RE	1	2
3.	List two methods of sugar preservation.	RE	2	2
4.	Name one product made from fruit processing.	RE	2	2
5.	List two types of dryers.	RE	3	2
6.	What is freeze-drying?	RE	3	2
7.	Find the equipment used in minimal processing.	RE	4	2
8.	What is sauerkraut?	RE	4	2
9.	List two types of cans.	RE	5	2
10.	What is sterilization?	RE	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
11.	a	Explain the physiological changes that occur during post-harvest storage.	UN	1	13
		Or			
	b	Compare and contrast different storage methods.	UN	1	13
12.	a	Apply the process of making jam and jelly in fruits.	AP	2	13
		Or			
	b	Identify the role of sugar in fruit preservation.	AP	2	13

13.	a	Summarize the challenges and solutions for storing dried products.	UN	3	13
		Or			
	b	Infer the principles of dehydration.	UN	3	13
14.	a	Explain the principles of minimal processing.	UN	4	13
		Or			
	b	Illustrate the fermentation process for wine production.	UN	4	13
15.	a	Categorize the canning process.	AN	5	13
		Or			
	b	Analyze the importance of sterilization in canning.	AN	5	13

*PART – C (Marks 1*15 = 15)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
16.	a	Develop and justify a cost-effective storage facility design for small-scale farmers to optimize the shelf life and quality of fruits and vegetable.	EV	1	15
		Or			
	b	A fruit farmer wants to store apples for 6 months. Suggest a suitable storage method and explain its advantages.	EV	3	15